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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,059	03/09/2004	Brent Alan Elliott	CET-025985	4275

7590 03/08/2006  
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EXAMINER
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MAI, ANH T

ART UNIT	PAPER NUMBER
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2832

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/736,059

Applicant(s)

ELLIOTT ET AL.

Examiner

Anh T. Mai

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4, 5, 7, 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Ueda et al. [5861792].

Ueda discloses a monolithic core structure comprising:

- a plurality of magnetic layers 15;
- nonmagnetic layers 16,16 separating the plurality of magnetic layers from one another;
- a first opening through the first core structure;
- a conductive element 9 established conductive path through the opening;
- wherein at least one nonmagnetic layer 16 separates the conductive element from the magnetic layers [figure 1].
- The first opening is substantially rectangular and non-magnetic layer defined on side of the opening.

With respect to claim 7, the conductive element 9 having plurality of sides and said opening comprises inner surface defined by magnetic layers and non-magnetic layers 16 as shown in figure 1.

With respect to claim 12, the conductive element 9 is in contact with and supported by non-magnetic layer 16 and otherwise substantially centered with respect to the opening.

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With respect to claim 13, Ueda discloses the invention as claimed therefore; it is inherent that flux lines of structure core do not intersect the conductor element.

With respect to claim 14, the conductive element is complementary in shape to the opening [figure 2].

3. Claims 15-16, 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ibata et al. [JP0442513A].

Ibata discloses:

- a monolithic core structure of first and second core structure separated by insulating layer 2;
- each of first and second core comprising a plurality of magnetic layers 1;
- at least one non-magnetic layer 2 separating one of said plurality of magnetic layers from another of said plurality of magnetic layers;
- an opening extending there through for passage of conductive element 3 [figures 1-3];
- the insulating layers are parallel to the magnetic layers.

With respect to claim 18, the opening of first and second core structure is rectangular [figure 1].

#### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda in view of Ishii et al. [6433664].

Ueda discloses the invention as claimed as cited above except for the conductive element comprising a rectangular conductor. Ishii discloses a conductor 6 having rectangular cross-section wound around core 2 [figure 1]. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use rectangular conductor as taught by Ishii to the core as disclosed by Ueda. The motivation would have been to fit the conductor into the groove and the turns are spaced from each other [col 1, lines 39-41]. Therefore, it would have been obvious to combine Ishii with Ueda.

6. Claims 6, 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda in view of Ibata.

Ueda discloses the invention as claimed as cited above except for non-magnetic layer extends substantially parallel to the magnetic layers, a second core structure monolithically formed with first core structure and insulating layer monolithically formed with and separating first core structure to second core structure.

Ibata discloses dielectric layer 2 being parallel with magnetic layer 1 as shown in figure 2; first and second core of magnetic layers and separated by non-magnetic layer 2. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use insulating layer as taught by Ibata to the magnetic core of Ueda. The motivation would have been to provide small power loss when operating in high frequency of the component [see Purpose]. Therefore, it would have been obvious to combine Ibata with Ueda.

With respect to claim 11, Ueda discloses insulating layer 16 perpendicular to the magnetic layers.

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7. Claims 17, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ibata et al. in view of Ueda.

Ibata discloses the invention as claimed as cited above except for a insulating layer extends substantially perpendicular to the magnetic layers of at least one of said first and second core structures. Ueda discloses the insulating layer 16 being perpendicular to the plurality of the core [figure 1]. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have an insulating layer as taught by Ueda to the plurality of magnetic layers as disclosed by Ibata. The motivation would have been to ensure the insulation between the laminate cores and the winding [col 4, lines 25-28]. Therefore, it would have been obvious to combine Ueda with Ibata.

With respect to claim 19, Ueda discloses a pair of insulating layers 16 defining opposite side of the opening for the core as shown in figure 1.

With respect to claim 20, Ueda discloses a conductive element 9 to produce conductive path.

#### *Response to Arguments*

8. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh T. Mai whose telephone number is 571-272-1995. The examiner can normally be reached on 5/4/9 Schedule.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'Anh Mai', with a long horizontal stroke extending to the right.

**ANH MAI  
PRIMARY EXAMINER**